

21 MAY 1979

MEMORANDUM FOR THE RECORD

SUBJECT: Potential Energy to be Saved by Eliminating
Parking in the DCI Garage

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1. The question of energy conservation has led to a search for new ways to eliminate consumption throughout the Agency. One area of interest is the DCI Garage in Headquarters Building.

2. The DCI garage is an underground parking facility. As such, it is necessary to ventilate the entire area 24-hours per day. By design, 45,000 cubic feet of fresh air per minute are required for this garage. Assuming an average heating temperature differential of 27.5°F for 182 days per year, it can be shown that approximately 5,896,800,000 Btu are required for a typical winter. If heating oil delivers 102,571 Btu/gal it can be estimated that 57,489 gallons of oil per year are required to heat the DCI Garage. Noting that the installed unit heaters do not have sufficient capacity to use the above computed amount of steam, a second method shows that for the same number of days the presently installed equipment will require consumption of 28,750 gallons of oil. In view of the occasional freezing of pipes located in the garage area, it is evident that the installed capacity is not quite adequate and the use of the more conservative figure above is probably more accurate.

3. Using total fuel consumed by the Powerplant boilers from 1 April 1978 to 1 April 1979 as 1,524,090 gallons, the 28,750 gallons estimated is approximately 1% of the total requirement for heat on the compound.

4. If the DCI Garage were closed in order to conserve energy, it would release approximately 5,000 square feet of space for other uses. Additional space exists but would be required to maintain access to basement equipment rooms and special-use areas.

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